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Evaluation of Remote Sensing in Control of Pink Cotton Bollworm

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(E73-10073) EVALUATION OF REMOTE SENSING
IN CONTROL OF PINK COTTON BOLLWORM
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Objective

The purpose of our project is to identify and map cotton fields in the southern deserts of California. The California State Department of Agriculture has regulated the planting and plow down dates of cotton in order to control the pink cotton bollworm. At present, the 800,000 acres of cotton in California are mapped by ground survey teams. It was felt that satellite data could provide a viable alternative to ground survey mapping.

Summary of Work and Accomplishments

The work for this period has consisted entirely of analyzing the December imagery from ERTS-1 and the U-2 underflight photography to determine the critical stages of cotton plow down. The ERTS-1 imagery is being analyzed using the I²S (International Imaging Systems) optical color combiner, but results are not yet completed. The U-2 photography has shown that the critical stages of cotton plow down-defoliation, shredding, and plowing-are distinctly identifiable.

The work planned for the next reporting period will include completed results of the analysis of ERTS-1 imagery for December. Maps of the Imperial, Coachella, and Palo Verde Valleys will be produced showing all fields which could potentially be planted to cotton.

Significant Results

The U-2 underflight photography has shown that the critical stages in cotton plow down - defoliation, shredding, and plowing - can be identified. This result will prove invaluable to a user agency whose purpose is to monitor the cotton season for compliance with California State Law.

Progress

There are no problems impeding progress. Work is on schedule. The funding is adequate. Every effort is being made to achieve reliability because the results achieved in this investigation will be turned over to user agencies and our satellite mapping must agree with their ground mapping.

Data Requirement Information

No publications have been made. There are no changes in the standing order forms, the data request forms, the ERTS descriptor forms, or in personnel.

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Agriculture/Forestry/Range Resources: Crop Survey and Classification

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